



# cream**source**



## User Manual

For software V4.5

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## Safety Information



High power LED light is emitted from this product. Do not stare directly into the beam, permanent eye damage could result



Case can get hot during normal operation. Please take care when handling unit. Maximum Surface Temperature  $T_c = 70 \text{ deg C}$



Power Supply has dangerous voltages inside. Do not open or expose to moisture



Falling hazard - make sure unit is properly secured and safety chain attached

## Compliance Notes

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.



N24018



Intended for indoor use only



Please make sure discarded electrical waste is properly recycled to reduce environmental impact. Please use a separate collection facility or contact the supplier from which this fixture was purchased



# Introduction

Thank you for buying a Outsight Creamsource luminaire. This fixture is engineered and manufactured to high standards and will give you years of reliable service.

Please take the time to read this manual before using your Creamsource. This will give you a good understanding of the full functionality of the Creamsource and its capabilities

## Understanding Part Numbering

The compliance plate located on the bottom of the creamsource identifies the specific model, including colour temperature and lens type. See example part number below for explanation of how to interpret part numbers:

K-CS-140-1-D-S

<b>K</b>	When supplied as a kit with matching power supply and cables, there is a ‘K’ in front of the part number. The part number for the lamp head is the same, only without the ‘K’	
<b>CS</b>	<b>Product Identifier</b> CS      Full Size Creamsource (2x1 Format) CSM    Creamsource Mini (1x1 Format)	
<b>140</b>	<b>Number of LEDs</b> 40      Mini Classic 60      Mini Doppio or Bender 80      Full Size Classic 140     Full Size Doppio or Bender	
<b>1</b>	<b>Hardware Revision number</b>	
<b>D</b>	<b>LED Colour Temperature</b> D      Daylight                    5600K T      Tungsten                    3200K B      Bender                      2700K-6500K BT     Bender Tungsten        2700K-4000K BD     Bender Daylight        4000K-6500K	
<b>S</b>	<b>Lens Type</b> S      Spot F      Flood	

## Plugging In and Turning On

The Creamsource should only be used with the supplied power supply. The input is auto-ranging from 90-250V AC, 50/60Hz so can be used world wide.



Connect the power cable with the power turned off on the power supply to extend the life of the connectors. The Creamsource remembers its last brightness setting, and also if the light was turned on or off. It also remembers the last MODE it was used in.

Up to 15m (50ft) of extension cable can be run between the power supply and the head.

To prevent overheating, care must be taken not to block cooling slots on the power supply. It is not advisable to stack power supplies on top of one another.

The unit can also be run off 24V - 32V battery packs, providing they have the required current capability. See page 14 for more information on running with batteries.



**If the external flexible cable of this luminaire is damaged, it must be replaced by an original cable from the manufacturer or service agent.**

## Turning Off

The power should be switched off on the power supply before unplugging the cable. There are no other special procedures for powering down - it can be done at any time without harm to the unit.

## Temperature

As the Creamsource is a high power device, it will get hot during normal operation, and care must be taken when touching the unit.

The maximum surface temperature of the lamp head will be 60 deg C, when operated in ambient temperature of 25 deg C

Maximum ambient temperature for normal operation is 40 deg C.

## Rigging and Safety

The recommended rigging position of the Creamsource is with the cooling fins in a vertical orientation, as this allows for the best natural cooling of the unit. It can be mounted in other positions; however care must be taken not to smother the cooling fins on the back of the unit. It is advisable to keep a 10cm clearance around the unit to maintain airflow.

The yoke arm accepts a 5/8 inch spigot, so is compatible with a large range of stands and other rigging equipment. With the supplied spigot, the unit is suitable for floor stand mounting only.



**If the unit is to be mounted suspended, it is necessary to replace the standard spigot with a 28mm DIN or Euro spigot (For example Doughty T74705)**

If rigging the unit above people, from vehicles, moving platforms, or hanging from any rigging, be sure to secure the unit through the safety-cable holes located at each end of the Creamsource using approved and correctly rated safety cables, chains or carabiners. Both safety chain holes should be used.



**For a Full Size Creamsource, use appropriate safety cable for 10kg load**

**For a Mini Creamsource, use appropriate safety cable for 6kg load**

## Rigging Power Supply

The CS-PSU-450 power supply unit has two 3/8" threaded inserts on its base for rigging purposes. These can be used to secure the unit to a stand or other structure.

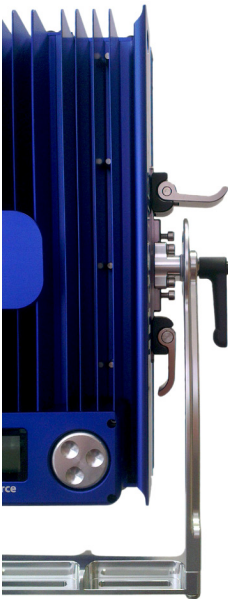


**Do not use bolts which protrude more than 25mm (1 inch) into the power supply housing**



# Quick Release Yoke

The yoke can be quickly removed without the use of any tools. Simply flip the levers on each side of the yoke to the UP position, and slide the yoke up and off the unit.



**Lift levers to UP position**

**Slide yoke up and off unit**

**Lock yoke in place by pressing levers to DOWN position**



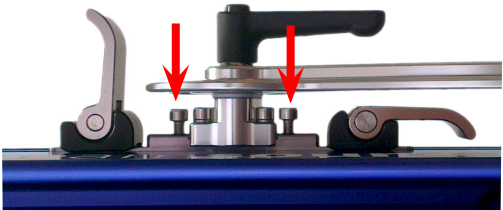
## Adjusting Quick Release Yoke

To adjust the grip of the locking levers, use a 4mm hex tool (supplied) to adjust the screw when the lockers are in the DOWN position. They should be adjusted so the lever requires firm pressure to lock and unlock.

## Yoke Safety Screws



If using the Creamsource in a fixed installation for extended periods of time, please tighten the SAFETY SCREWS for additional protection. There are two of these screws on each side of the yoke.



## Controls

The control wheel adjusts the intensity or colour temperature of the light output. It is speed sensitive, so it can be turned slowly for fine adjustments, or quickly for rapid changes.



It also is used to change other settings such as strobe frequency or dual flash level when using these modes.

## Normal Operation

Under normal operation the buttons have dedicated functions:

MENU	- press to display menu
NEXT	- press to select next setting to adjust (then use wheel to change)
ON/OFF	- press to turn light on and off
FLASH	- flashes light on or off when held down

## Menu System

When in the menu, the buttons have the following functions:

- ◀ Back - press to go back a menu level. Hold to return to main screen
- ↑ Up - press to scroll up, or increase setting value. Hold to scroll quickly
- ➡ Select - press to accept current menu item or setting
- ↓ Down - press to scroll down, or decrease setting value. Hold to scroll quickly

## Changing Colour Temperature

The colour can be changed by pressing the NEXT button until the COLOUR heading is displayed. The wheel can then be used to smoothly change through the available colour temperature range. The display indicates approximate colour temperature, in Kelvin.

There are two modes for colour mixing:

<b>Normal</b>	- As the colour mix is altered, brightness remains constant
<b>Boost Brightness</b>	- Allows for maximum brightness, however output level will not remain constant when changing colour mix

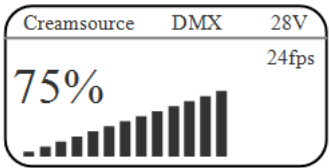
Boost Brightness mode can be enabled by selecting it in the Main Menu screen.




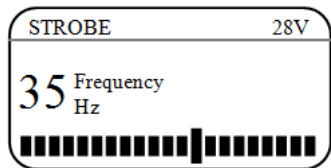
# LCD Display and Menu

## General Info Display

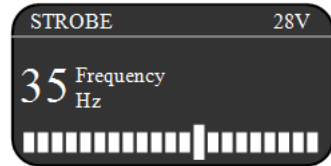
This is the normal display mode of the Creamsource. The current intensity level is displayed, along with additional information in the status area at the top of the screen:



- When a DMX signal is detected, the text “DMX” appears
- When the rotary wheel is locked, a lock icon  is shown
- The current input voltage is always displayed in upper right (except in BENDER models, where the colour temperature is displayed)
- When an external sync signal is present, the framerate is displayed upper right
- When External Triggering mode is enabled, ‘EXT’ is displayed in upper right



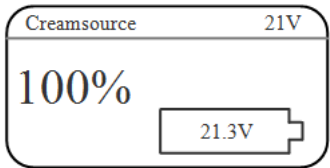
When using special modes such as Strobe and Random, the display will change to show the selected setting when the NEXT button is pressed.



When the light output is turned off, the display changes to negative mode (white text on black background).

## Low Battery Warning

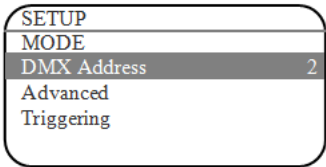
If the input voltages falls to a level that will cause the light output to drop, a flashing battery icon is displayed at the bottom of the screen. The unit can still be operated - however you may not be getting 100% brightness, and may also damage the batteries.



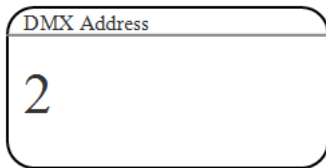
### How to Use the Menu

This display is shown when in the menu system, allowing the user to change settings. The status area now shows the current menu level, or setting to be changed.

Use the **↑** and **↓** buttons to scroll up and down, and **➡** to select setting to change.



Use **↑** and **↓** to adjust value up and down. Press **⬅** to go back a level.



### High Speed

When using the Creamsource at 100%, it is flicker free to over 10,000fps. However when dimming, or when using a Bender which is not set to Maximum Output, flicker can become noticeable at speeds over 700fps.

There is dedicated High Speed mode on all Daylight and Tungsten units (not the Bender) which allows for flicker free at up to 2,000fps when dimming the unit. This can be enabled by selecting: MENU->Advanced->High Speed



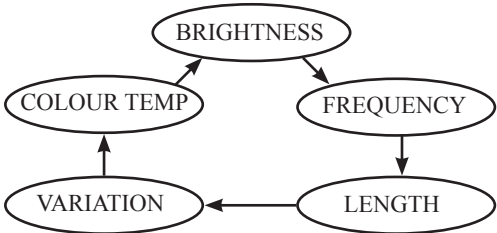
**When in High Speed mode the dimming will not be as smooth, or as accurate. For smooth accurate dimming please disable High Speed mode.**

### Description of Modes

Different lighting modes and effects such as Strobe and Timed Flash are available under MENU->MODES.

Use the NEXT button to switch between settings for adjustment, and then the wheel to change that setting. Each time NEXT is pressed, the next setting is selected

The ON/OFF and FLASH buttons can also be used as normal to switch the effect on/off or to create ‘bursts’.



Note the Colour Temperature setting is only available on the Bender models, and the range will be dependant on the particular model of Bender.

## **NORMAL**

Normal is for using the light as a normal solid light source. Intensity and Colour Temperature (Bender models only) may be adjusted. The ON/OFF button can be used to turn the light on or off, and the FLASH button can be used to create flashes

SETTING	RANGE	DESCRIPTION
BRIGHTNESS	0-100%	Light output level
COLOUR TEMP	2700-6500K	Approximate colour temperature

## **DUAL LEVEL**

Dual level allows two light levels to be set, one that is switched to when the FLASH button is pressed. Useful if you need a modeling light level, but then want to flash brighter for a lightening or strobe effect. Use the ON/OFF button to turn on or off the modeling light, and FLASH button to flash up to the Flash Level setting.

SETTING	RANGE	DESCRIPTION
BRIGHTNESS	0-100%	Modeling light output level
FLASH LEVEL	0-100%	Light output when FLASH button pressed
COLOUR TEMP	2700-6500K	Approximate colour temperature

## **STROBE**

Used for strobe effects. The ON/OFF button can be used to turn the effect on or off, and the FLASH button can be used to create ‘bursts’ of strobe

SETTING	RANGE	DESCRIPTION
BRIGHTNESS	0-100%	Strobe brightness level
FREQUENCY	1-50Hz	Frequency of strobe effect
DUTY CYCLE	1-99%	Duty cycle of strobe effect - the ratio between light OFF and ON times
COLOUR TEMP	2700-6500K	Approximate colour temperature

## RANDOM

Creates a random pattern of flashes that can be adjusted to look similar to lightning, welding or other flashing effects. The ON/OFF button can be used to turn the effect on or off, and the FLASH button can be used to create ‘bursts’ of random flashing

SETTING	RANGE	DESCRIPTION
BRIGHTNESS	0-100%	Maximum flash brightness
FREQUENCY	1-50Hz	Frequency of random effect
LENGTH	2-200mS	Maximum length of any flash
VARIATION	0-100%	Amount the brightness is allowed to vary from the BRIGHTNESS setting. 0 = No Variation (flashes will all be same brightness). 100 = Flashes can be any brightness
COLOUR TEMP	2700-6500K	Approximate colour temperature

## TIMED FLASH

Used to create flashes of a defined duration, similar to a Studio Strobe light. A modelling level can also be set. The flash can be triggered by pressing the FLASH button, or if ‘External Triggering’ is enabled (see page 15) it can be triggered from an external source such as a camera hotshoe.

SETTING	RANGE	DESCRIPTION
MODEL LEVEL	0-100%	Modeling light output level
FLASH LEVEL	0-100%	Light output when FLASH triggered
FLASH TIME	1/5 <sup>TH</sup> - 1/5000 <sup>TH</sup> Sec	Duration that light is flashed ON for
COLOUR TEMP	2700-6500K	Approximate colour temperature

## CALIBRATE SYNC

This is a special mode used for calibrating the light to an external sync source, such as the FlashBandit sync box. It is used to make sure the camera shutter and Creamsource are synchronised, to prevent the flash-banding effects when shooting on a CMOS sensor camera. See page 16 for more details.

SETTING	RANGE	DESCRIPTION
PHASE	0-350 Deg	Phase offset of camera shutter pulse

## Synchronising Multiple Units

Multiple Creamsources can be connected together to operate in unison, without the requirement of an external DMX controller. Simply connect together with standard DMX cable between the DMX IN and DMX THRU sockets, and all units become automatically synchronised.

A change on one unit (brightness, colour temperature etc) will be reflected on all other units. This allows for a bank of Creamsources to be operated as if they were one large source.

To synchronise special effects modes such as Strobe and Random, the mode should be set up on one Creamsource only, with the other units set to Normal mode. This Creamsource then becomes the Master, and drives the others in sync with it. Any changes to settings, or using the ON/OFF and FLASH buttons should be done from this unit.

Classics, Doppios, Benders and Minis all work seamlessly together.

## DMX Control

The Creamsource is fully controllable via the 5 pin DMX ports on the back of the unit. When a valid DMX signal is present, the manual controls for the unit are disabled. These are restored one second after loss of DMX signal.



The DMX address can be set through the menu system, with each unit requiring 2 address slots in basic 8 bit mode. The first address will control intensity, and the next adjacent address controls colour temperature (for Bender models only).

## Smooth Fading

To add smoothing to intensity adjustments and remove the ‘choppy’ look of fades, there is an option to add smoothing to the DMX. This replicates a traditional tungsten look, with slight delay on the fader. This can be enabled by selecting MENU->Advanced->DMX Smooth.

## DMX Scenarios

There are several different DMX modes for different applications, from basic control of intensity and colour temperature to full access to special effects functionality over multiple channels. Both 8 and 16 bit modes are supported. Please see page 20 for full description of modes.

To enable 16 bit channel resolution, select MENU->Advanced->DMX 16bit

To enable effects channels, select MENU->Advanced->DMX Effects

## Termination

As with all DMX installations, the last unit in the chain should be terminated. This can be done through the menu system, by selecting MENU->Advanced->DMX Terminated.

## Running from Batteries

Both the Mini and the Full Size Creamsource can be run on DC battery power directly, with no additional hardware required. The Creamsource Mini also has an attachment for mounting V-Lock or Anton Bauer batteries onto the unit. The recommended battery voltage is 24V and 32V.



**DO NOT EXCEED 35V OR YOUR CREAMSOURCE MAY BE DAMAGED!**

The table below shows power requirements for the different models of Creamsource, when running at maximum brightness. Battery Amp-Hour ratings should be chosen accordingly.

Creamsource Type		Wattage	Current Draw @ 24V
CSM-40	Mini Classic	90W	3.8A
CSM-60	Mini Doppio	150W	6.3A
CS-80	Full Size Classic	220W	9.1A
CS-140	Full Size Doppio	350W	14.6A

### Pinout for Full Size Creamsource

Choose a 4 core cable of >15AWG (1.5mm<sup>2</sup>) and wire all 4 pins

Pin	Wire To
E	- Ve
1	- Ve
2	+ Ve
3	+ Ve

### Pinout for Mini Creamsource

Choose a 2 core cable of >15AWG (1.5mm<sup>2</sup>) and wire both pins

Pin	Wire To
1	- Ve
2	+ Ve

Connector types to plug into Creamsource Lamp Heads

Creamsource	Connector	Manufacturer	Part Number
CSM Mini	XLR 3 Pin Female	Neutrik	NC3FXX
CS Full Size	Ecomate 4 Pin Female	Amphenol	C016 20D003 110 10

Connector types to plug into Creamsource Power Supplies

Power Supply	Connector	Manufacturer	Part Number
CSM-PSU-160	XLR 3 Pin Male	Neutrik	NC3MXX
CS-PSU-450	Ecomate 4 Pin Male	Amphenol	C016 20H003 110 10

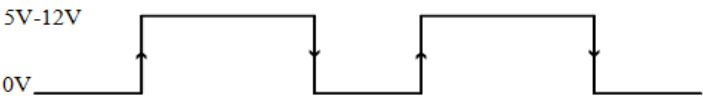
# External Effects Triggering

This allows an external pulse to trigger any effects including Timed Flash and Dual Level Flash. It is essentially a way of remotely accessing the FLASH button, and performs the same function as pressing and releasing this button.

External triggering can be enabled by selecting  
MENU->Advanced->Triggering->External Trigger

When enabled, the text **EXT** appears in the upper right of the LCD display.

- The Rising pulse edge triggers the effect, and is the same as pressing the FLASH button in.
- The Falling pulse edge is the same as releasing the FLASH button.



An input voltage from 5V – 12V can be used for trigger.

## Accessories Port Pinout

Connector Type: LEMO 1B Socket 7 Pin  
Mating Plug: LEMO 1B Plug 7 Pin FGG .1B.307



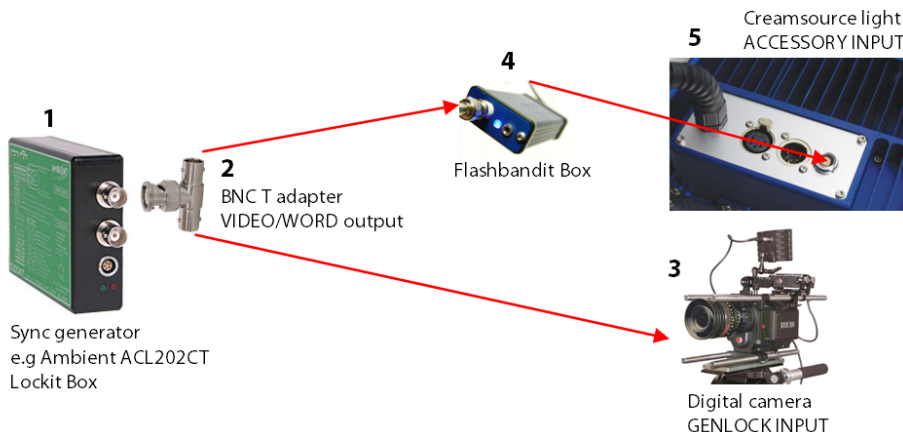
Pin	Description
1	TRIGGER Input +Ve (5-12V Input, referenced to GND)
2	DMX A
3	DMX B
4	RS232 RX
5	RS232 TX
6	GND, Ground Reference
7	+5V Output, 200mA maximum

## Syncing to Camera

The Creamsource can be triggered from an external source, such as a sync generator box (e.g. Ambient ACL202CT Lockit box), to ensure that it is synchronised with the camera shutter. This can be used to solve the frame tearing / flash banding problem most digital CMOS (and in fact some CCD/ film) cameras can have with any flashing or strobing light source.



**It is not necessary to use sync unless using strobing or flashing effects. Used as a solid light source the Creamsource is flicker free to over 1,000 frames per second.**



## Setup

1. Set correct framerate and format on Lockit box [1] (see instruction manual for device). This should match the frame rate and format you intend to shoot at
2. Plug a BNC T adapter [2] into the VIDEO/WORD output of the Lockit box
3. Connect camera GENLOCK input [3] to Lockit box [2] with coaxial cable. Follow camera instructions to enable external genlock input, and make sure camera is receiving genlock signal (if shooting on RED camera, see instructions on next page)
4. Plug Flashbandit adapter [4] into Accessories input on Creamsource [5]
5. Connect Flashbandit to Lockit Box using coaxial cable – blue light on Flashbandit should flash indicating valid signal
6. Check correct framerate is shown on Creamsource display



## Calibration

Before the shoot it is necessary to calibrate the Creamsource with the camera. This simple step insures that the camera shutter and Creamsource are in phase.

1. Setup as above
2. Point camera directly at Creamsource light
3. Select MENU->MODES->Calibrate Sync on Creamsource. It will start to flash at the locked framerate
4. Use wheel to adjust phase on Creamsource. As you change the phase, a dark band should appear to move up and down on the camera monitor. Adjust until the dark band fills the monitor completely. Shooting with wide shutter angles and at higher speeds reduces the size of the dark band, making calibration more difficult.
5. The Creamsource is now calibrated. It can be now be set to desired mode (Normal, Strobe etc)  
E.g. Select MENU->MODES->Normal

## Shooting

Once the creamsource has been calibrated, any of the modes may be used without the possibility of causing torn frames. The remote dimmer unit or DMX control can also be used safely.

If the framerate, shutter angle or the phase of the camera shutter is adjusted, then you will need to re-calibrate.

## Specifications for Creamsource Full Size

Specifications for complete system	
<i>Complete system includes Lamp Head, Power Supply and Power Cables</i>	
Model Number	K-CS-140-1-x-y
Input	90-260V AC, 50-60Hz, 6.0A
Environmental	Max Ta:40°C
Certifications	EN55015
	EN61547
	EN61000-3-2
	EN61003-3
	EN60598.2.17
	DIN EN62471:03 - Risk Group 1
	FCC Part 15, Class A
	AS/NZS 61347.1 & AS/NZS 61347.2.13
	RoHS

Specifications for Power Supply	
Model Number	CS-PSU-450
Input	90-260V AC, 50-60Hz, 6.0A
Output	28.0V DC, 15.26A MAX
Environmental	Max Ta:40°C
Weight	2.4kg

Specifications for Lamp Head	
Model Number	CS-140-1-x-y
Input	24-32V DC, Max 14.6A, 350W
Environmental	Max Ta:40°C
Fuse	20A, 58V, Automotive Type (located behind connectors)
Weight	9.4kg (including yoke)
Dimensions	770 x 455 x 100mm (including yoke)
Cooling	Passive (silent) under normal conditions. Low noise backup fans



The front protection screen must be changed if it has become visibly damaged to such an extent that its effectiveness is impaired, for example by cracks or deep scratches.

## Specifications for Creamsource Mini

Specifications for complete system	
<i>Complete system includes Lamp Head, Power Supply and Power Cables</i>	
Model Number	K-CSM-60-1-x-y
Input	90-260V AC, 50-60Hz, 2.0A
Environmental	Max Ta:40°C
Certifications	EN55015
	EN61547
	EN61000-3-2
	EN61003-3
	EN60598.2.17
	DIN EN62471:03 - Risk Group 1
	FCC Part 15, Class A
	AS/NZS 61347.1 & AS/NZS 61347.2.13
	RoHS

Specifications for Power Supply	
Model Number	CSM-PSU-160
Input	90-260V AC, 50-60Hz, 2.0A
Output	24.0V DC, 6.67A MAX
Environmental	Max Ta:40°C
Weight	0.6kg

Specifications for Lamp Head	
Model Number	CSM-60-1-x-y
Input	24-32V DC, Max 6.3A, 150W
Environmental	Max Ta:40°C
Fuse	10A, 58V, Automotive Type (located behind connectors)
Weight	5.2kg (including yoke)
Dimensions	400 x 455 x 100mm (including yoke)
Cooling	Passive (silent) under normal conditions. Low noise backup fans



The front protection screen must be changed if it has become visibly damaged to such an extent that its effectiveness is impaired, for example by cracks or deep scratches.

## DMX Implementation Tables

The Creamsource offers a number of different DMX implementations, in both 8 and 16 bit resolutions. These charts refer to software versions 4.5 and above.

Under the Advanced Menu in the Creamsource, the following modes can be achieved by setting 'DMX 16bit' & 'DMX Effects' checkboxes as desired

When using the single colour Creamsource (i.e. Daylight or Tungsten) the CCT slot is still present, but is ignored.

Scenario	Resolution	Comments
1	8 Bit	Brightness, CCT
2	8 Bit	Brightness, CCT, Smoothing, Effects
3	16 Bit	Brightness, CCT
4	16 Bit	Brightness, CCT, Smoothing, Effects

For scenarios 1 & 3, smoothing is controlled by 'DMX Smooth' setting in the Advanced Menu in the Creamsource. For modes 2 & 4, it is controlled by the relevant channel and the 'DMX Smooth' setting in the Creamsource is ignored.

*Scenario 1: 8 Bits - Brightness, CCT*

Slot No	Slot Name	DMX Value	Output Value
1	Brightness	000...255	0...100%
2	CCT	000...255	2700...6500K

*Scenario 2: 8 Bits - Brightness, CCT, Smoothing, Effects*

Slot No	Slot Name	DMX Value	Output Value
1	Brightness	000...255	0...100%
2	CCT	000...255	2700...6500K
3	Smoothing	000...127	Smoothing ON
		128...255	Smoothing OFF
4	Effects Rate	000...255	1...50Hz
5	Effects Duration	000...255	1...99%
6	Effects Mode	000...019	Normal (no effects)
		020...029	Strobe Effect
		030...039	Random Effect
		040...049	Reserved (no effects)
7	Effects Variation	000...255	0...100%

*Scenario 3: 16 Bits - Brightness, CCT*

Slot No	Slot Name	DMX Value		Output Value
1	Brightness	HI	00000...65535	0...100%
2		LO		
3	CCT	HI	00000...65535	2700...6500K
4		LO		

*Scenario 4: 16 Bits - Brightness, CCT, Smoothing, Effects*

Slot No	Slot Name	DMX Value		Output Value
1	Brightness	HI	00000...65535	0...100%
2		LO		
3	CCT	HI	00000...65535	2700...6500K
4		LO		
5	Smoothing	000...127		Smoothing ON
		128...255		Smoothing OFF
6	Effects Rate	000...255		1...50Hz
7	Effects Duration	000...255		1...99%
8	Effects Mode	000...019		Normal (no effects)
		020...029		Strobe Effect
		030...039		Random Effect
		040...049		Reserved (no effect)
9	Effects Variation	000...255		0...100%





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